CLAIMS:

We claim:

1. A method for positioning side panels during manufacture of a pant, comprising:

transporting a pant in a machine direction thus defining a pant transport plane and a z-direction perpendicular to the pant transport plane, the pant comprising at least one waist region comprising opposite side panels; and

positioning the side panels within fluid flow devices, each fluid flow device defining a side panel transport path which is disposed at an angle with respect to the pant transport plane;

whereby at least laterally outward portions of the side panels move in the z-direction while the pant is transported in the machine direction and the side panels reside within the fluid flow devices.

2. The method of claim 1, further comprising allowing at least the laterally outward portions of the side panels to move inward toward a machine center line while the pant is transported in the machine direction and the side panels reside within the fluid flow devices.

3. The method of claim 1, wherein positioning the side panels within fluid flow devices comprises inserting the side panels in passageways having a flow of fluid from an entry slot toward a discharge region.

4. A method for positioning side panels during manufacture of a pant, comprising:

transporting a pant in a machine direction thus defining a pant transport plane and a z-direction perpendicular to the pant transport plane, the pant comprising at least one waist region comprising opposite side panels; and

positioning the side panels within fluid flow devices located on opposite sides of a machine center line, each fluid flow device oriented at an angle with respect to the pant transport plane such that at least laterally outward portions of the side panels move in the z-direction and toward the machine center line while the pant is transported in the machine direction and the side panels reside within the fluid flow devices.

5. The method of claim 4, wherein the pant comprises opposite first and second waist regions, the first waist region comprising first side panels and the second waist region comprising second side panels, the first and second side panels each comprising fastening components, and laterally outward portions of the first side panels are moved inward such that the fastening components disposed on the first side panels are aligned in a cross machine direction with the fastening components disposed on the second side panels.

6. The method of claim 4, wherein positioning the side panels within fluid flow devices comprises inserting the side panels in passageways having a flow of fluid from an entry slot toward a discharge region.

7. A method for making a prefastened and refastenable pant, comprising:

transporting a folded pant in a machine direction thus defining a pant transport plane and a z-direction perpendicular to the pant transport plane, the folded pant having opposite first and second waist regions in facing relation, the first waist region comprising first side panels and the second waist region comprising second side panels, the first side panels comprising initially inward-facing fastening components, and the second side panels comprising initially outward-facing fastening components;

inverting the initially outward-facing fastening components;

transporting the first side panels within fluid flow devices in the z-direction away from the pant transport plane while the folded pant is transported in the machine direction;

transferring the first side panels from the fluid flow devices to side panel transfer devices;

transporting the first side panels on the side panel transfer devices in the z-direction toward the pant transport plane while the folded pant is transported in the machine direction; and

engaging the initially inward-facing and initially outward-facing fastening components.

8. The method of claim 7, wherein the fluid flow devices and side panel transfer devices are angled in opposite directions relative to the pant transport plane.

9. The method of claim 8, wherein the fluid flow devices are declined relative to the pant transport plane and the side panel transport devices are inclined relative to the pant transport plane.

10. The method of claim 7, wherein laterally outward portions of the first side panels are moved inward such that the initially inward-facing fastening components are aligned in a cross machine direction with the inverted initially outward-facing fastening components.

11. The method of claim 7, further comprising maintaining the first side panels at a constant cross-machine direction position while the folded pant is transported in the machine direction and the first side panels reside on the side panel transfer devices.

12. The method of claim 7, wherein the initially inward-facing fastening components are separated from one another by an initial distance and the initially outward-facing fastening components are separated from one another by substantially the same initial distance.

13. A method for positioning side panels during manufacture of a pant, comprising:

transporting a pant in a machine direction thus defining a pant transport plane and a z-direction perpendicular to the pant transport plane, the pant comprising at least one waist region comprising opposite side panels;

transporting at least laterally outward portions of the side panels in the z-direction away from the pant transport plane while the pant is transported in the machine direction;

positioning the side panels within internal passageways of fluid flow devices located on opposite sides of a machine center line, the internal passageways displaced in the z-direction outside the pant transport plane; and

transporting the side panels within the internal passageways while at least laterally outward portions of the side panels reside outside the pant transport plane and the pant is transported in the machine direction.

14. The method of claim 13, wherein each fluid flow device defines a side panel transport path that is at least in part parallel to the pant transport plane.

15. The method of claim 13, wherein each fluid flow device defines a side panel transport path that in part is parallel to the pant transport plane and in part is angled with respect to the pant transport plane.

16. The method of claim 13, wherein transporting at least laterally outward portions of the side panels in the z-direction away from the pant transport plane comprises positioning the side panels within additional fluid flow devices which are disposed at an angle with respect to the pant transport plane.

17. The method of claim 13, wherein transporting at least laterally outward portions of the side panels in the z-direction away from the pant transport plane comprises sliding the side panels on a guide plate.

18. The method of claim 13, wherein the internal passageways have a flow of fluid from an entry slot toward a discharge region.

19. The method of claim 13, wherein the internal passageways each define a reference surface that is displaced from the pant transport plane in the z-direction by greater than 0 millimeters and by less than about 50 millimeters.

20. The method of claim 13, wherein the internal passageways each define a reference surface that is displaced from the pant transport plane in the z-direction by greater than about 10 millimeters and by less than about 25 millimeters.

21. The method of claim 13, further comprising transferring the side panels from the fluid flow devices to side panel transfer devices and transporting at least the laterally outward portions of the side panels on the side panel transfer devices in the z-direction toward the pant transport plane while the pant is transported in the machine direction.

22. A method for positioning side panels during manufacture of a pant, comprising:

transporting a pant in a machine direction thus defining a pant transport plane and a z-direction perpendicular to the pant transport plane, the pant comprising at least one waist region comprising opposite side panels;

positioning the side panels within fluid flow devices located on opposite sides of a machine center line, each fluid flow device comprising walls defining an internal passageway, an entry slot to the internal passageway disposed toward the machine center line, and a fluid discharge region opposite the entry slot, the walls extending in the machine direction;

creating a flow of fluid through each internal passageway from the entry slot toward the fluid discharge region; and

transporting the side panels in the machine direction within the fluid flow devices while at least laterally outward portions of the side panels are displaced in the z-direction from the pant transport plane.

23. An apparatus, comprising:

first and second conveyors adapted to transport a stream of discrete, partially assembled and folded pants sandwiched between the conveyors in a machine direction, the conveyors defining a machine center line and a pant transport plane; and

fluid flow devices transversely outward from the machine center line, each fluid flow device defining a side panel transport path disposed at an angle to the pant transport plane.

24. The apparatus of claim 23, wherein the fluid flow devices are declined relative to the pant transport plane.

25. The apparatus of claim 23, wherein the fluid flow devices comprise an elongated body and define axes extending between opposite upstream and downstream ends, the axes forming an angle with the pant transport plane of about 1 to about 20 degrees.

26. The apparatus of claim 23, wherein the fluid flow devices each comprise an elongated body defining an internal passageway having an entry slot, the entry slot disposed toward the machine center line.

27. The apparatus of claim 26, further comprising air knives disposed adjacent the entry slots.

28. The apparatus of claim 26, wherein an end of the internal passageway opposite the entry slot defines a fluid discharge region which is adapted to be operatively connected to a vacuum source.

29. The apparatus of claim 26, wherein the internal passageway has a width of about 5 to about 20 millimeters.

30. The apparatus of claim 23, further comprising air knives disposed on support elements of at least one of the first and second conveyors, the air knives being adapted to direct pressurized fluid into internal passageways of the fluid flow devices.

31. An apparatus, comprising:

first and second conveyors adapted to transport a stream of discrete, partially assembled and folded pants sandwiched between the conveyors in a machine direction, the conveyors defining a machine center line, a pant transport plane, and a z-direction perpendicular to the pant transport plane; and

fluid flow devices transversely outward from the machine center line, each fluid flow device defining an internal passageway, an entry slot to the internal passageway disposed toward the machine center line, and a fluid discharge region opposite the entry slot, each internal passageway defining a reference surface that is displaced from the pant transport plane in the z-direction such that the internal passageways reside outside the pant transport plane.

32. The apparatus of claim 31, wherein each fluid flow device defines a side panel transport path that is at least in part parallel to the pant transport plane.

33. The apparatus of claim 31, wherein each fluid flow device defines a side panel transport path that in part is parallel to the pant transport plane and in part is angled with respect to the pant transport plane.

34. The apparatus of claim 31, wherein each reference surface is displaced from the pant transport plane in the z-direction by greater than 0 millimeters and by less than about 50 millimeters.

35. The apparatus of claim 31, wherein each reference surface is displaced from the pant transport plane in the z-direction by greater than about 10 millimeters and by less than about 25 millimeters.

36. The apparatus of claim 31, further comprising air knives adjacent the entry slots.

37. The apparatus of claim 31, further comprising air knives disposed on support elements of at least one of the first and second conveyors, the air knives being adapted to direct pressurized fluid into the internal passageways.